

Drop Wise?

Your task is to determine how many drops of water will fit on a penny. Talk in your group, come up with a hypothesis and write it below.

Design an experiment to test your hypothesis. You may only run one trial right now. Describe your experiment below.

Get permission from your teacher, then conduct your experiment and record the data and your observations. You may **NOT** touch the penny. Draw a sketch of how it looks just before you add the last drop.

We will share the class data. Talk in your group and be prepared to comment on class results.

As a group, answer the questions presented by your teacher.

Teacher notes:

1. Half the groups should get untreated pennies and half pennies treated with detergent.
2. Pick which side (heads or tails) will be treated with detergent and keep it consistent.
3. Rub the detergent on the selected pennies, and wipe off enough so that it is not obvious.
4. Place a penny at each station and caution students that they may not touch them. I wait until the groups are set and then move around distributing the pennies.
5. Have the groups share their data and compile a class average.
6. There should be a dramatic difference in the number of drops that will fit on the penny as well as the sketches of what they see.
7. Think of probing questions you can ask students. Is it really reasonable that the (heads or tails) side of a penny holds such a different number of drops?